

**Notice of Allowability**

Application No.

09/891,778

Examiner

Chirag G. Shah

Applicant(s)

HENNENLOTTER, WILLIAM

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

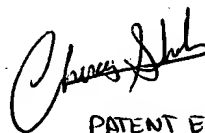
1. ☒ This communication is responsive to 5/9/06.
2. ☒ The allowed claim(s) is/are 1-7, 9-20, 22-32, 39, 41-45; renumbered 1-36 respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d). ✓
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.



PATENT EXAMINER, DIVISION 2616

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

Art Unit: 2616

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Reginald A. Ratliff on 5/24/06.

**Claims 1, 2, 4, 7, 9, 11, 14, 20, and 33-38 have been amended as follows:**

1. (currently amended) A method of diagramming a network having a plurality of devices, comprising the steps of:
  - a) determining a plurality of hierarchical layers for said network, wherein said devices are arranged in said hierarchical layers;
  - b) determining one or more groups in each hierarchical layer, wherein each group includes at least one device;
  - c) determining a first linked group having a first group from a first hierarchical layer and a first associated group having at least one group from a second hierarchical layer;
  - d) ~~forming~~ displaying via a display device a first cross-sectional representation corresponding to said first linked group, wherein said first cross-sectional representation has a first inner portion representing said first group and a first outer

portion having one or more sections each section corresponding to a group from said first associated group; and

e) ~~forming~~ displaying via said display device a plurality of initial reduced-size cross-sectional representations each located in each section of said first cross-sectional representation, wherein each initial reduced-size cross-sectional representation is similar to said first cross-sectional representation, wherein each group from said first associated group forms one of a plurality of second linked groups each second linked group having said group from said first associated group and a second associated group having at least one group from a third hierarchical layer, wherein each initial reduced-size cross-sectional representation has a reduced-size outer portion and a reduced-size inner portion, wherein each reduced-size inner portion represents said group which is from said first associated group and which is associated with said section in which said reduced-size inner portion is located, and wherein each reduced-size outer portion has one or more reduced-size sections each reduced-size section corresponding to a group from said second associated group of one of said second linked groups.

2. (currently amended) A method as recited in Claim 1 further comprising the steps of:

f) ~~forming~~ displaying via said display device a second cross-sectional representation corresponding to one of said initial reduced-size cross-sectional representations, wherein said second cross-sectional representation has a second outer

Art Unit: 2616

portion and a second inner portion each portion configured to represent an enlarged version of said reduced-size outer portion and said reduced-size inner portion respectively of said initial reduced-size cross-sectional representation, wherein said second cross-sectional representation is similar to said first cross-sectional representation; and

g) ~~forming~~ displaying via said display device a plurality of additional reduced-size cross-sectional representations each located in each section of said second outer portion of said second cross-sectional representation, wherein each additional reduced-size cross-sectional representation is similar to said second cross-sectional representation, wherein each group from said second associated group forms one of a plurality of third linked groups each third linked group having said group from said second associated group and a third associated group having at least one group from a fourth hierarchical layer, wherein each additional reduced-size cross-sectional representation has a second reduced-size outer portion and a second reduced-size inner portion, wherein each second reduced-size inner portion represents said group which is from said second associated group and which is associated with said section in which said second reduced-size inner portion is located, and wherein each second reduced-size outer portion has one or more second reduced-size sections each second reduced-size section corresponding to a group from said third associated group of one of said third linked groups.

4. (currently amended) A method as recited in Claim 2 further comprising the steps of:

h) ~~forming~~ displaying via said display device a third cross-sectional representation corresponding to one of said additional reduced-size cross-sectional representations, wherein said third cross-sectional representation has a third outer portion and a third inner portion each portion configured to represent an enlarged version of said second reduced-size outer portion and said second reduced-size inner portion respectively of said additional reduced-size cross-sectional representation, wherein said third cross-sectional representation is similar to said second cross-sectional representation; and

i) ~~forming~~ displaying via said display device a plurality of next reduced-size cross-sectional representations each located in each section of said third outer portion of said third cross-sectional representation, wherein each next reduced-size cross-sectional representation is similar to said third cross-sectional representation, wherein each group from said third associated group forms one of a plurality of fourth linked groups each fourth link group having said group from said third associated group and a fourth associated group having at least one group from a fifth hierarchical layer, wherein each next reduced-size cross-sectional representation has a third reduced-size outer portion and a third reduced-size inner portion, wherein each third reduced-size inner portion represents said group which is from said third associated group and which is associated with said section in which said third reduced-size inner portion is located, and wherein each third reduced-size outer portion has one or more third reduced-size

sections each third reduced-size section corresponding to a group from said fourth associated group of one of said fourth linked groups.

7. (currently amended) A method of diagramming a network having a plurality of devices, comprising the steps of:

a) determining a plurality of hierarchical layers for said network, wherein said devices are arranged in said hierarchical layers;

b) determining one or more groups in each hierarchical layer, wherein each group includes at least one device; and

c) ~~forming~~ displaying via a display device a multi-layered cross-sectional diagram corresponding to said network, wherein said multi-layered cross-sectional diagram has a plurality of cross-sectional representations which are similar to each other, wherein said plurality of cross-sectional representations have a plurality of sizes, and wherein each cross-sectional representation is adapted to visually represent a group from a hierarchical layer and is adapted to visually represent one or more other groups from another hierarchical layer, wherein said step c) includes:

c1) determining a first linked group having a first group from a first hierarchical layer and a first associated group having at least one group from a second hierarchical layer;

c2) ~~forming~~ displaying via said display device a first cross-sectional representation corresponding to said first linked group, wherein said first cross-sectional representation has a first inner portion representing said first group and a first outer

Art Unit: 2616

portion having one or more sections each section corresponding to a group from said first associated group; and

c3) ~~forming~~ displaying via said display device a plurality of initial reduced-size cross-sectional representations each located in each section of said first cross-sectional representation, wherein each initial reduced-size cross-sectional representation is similar to said first cross-sectional representation, wherein each group from said first associated group forms one of a plurality of second linked groups each second linked group having said group from said first associated group and a second associated group having at least one group from a third hierarchical layer, wherein each initial reduced-size cross-sectional representation has a reduced-size outer portion and a reduced-size inner portion, wherein each reduced-size inner portion represents said group which is from said first associated group and which is associated with said section in which said reduced-size inner portion is located, and wherein each reduced-size outer portion has one or more reduced-size sections each reduced-size section corresponding to a group from said second associated group of one of said second linked groups.

9. (currently amended) A method as recited in Claim 7 wherein said step c) further comprises the steps of:

c4) ~~forming~~ displaying via said display device a second cross-sectional representation corresponding to one of said initial reduced-size cross-sectional representations, wherein said second cross-sectional representation has a second outer

Art Unit: 2616

portion and a second inner portion each portion configured to represent an enlarged version of said reduced-size outer portion and said reduced-size inner portion respectively of said initial reduced-size cross-sectional representation, wherein said second cross-sectional representation is similar to said first cross-sectional representation; and

c5) ~~forming~~ displaying via said display device a plurality of additional reduced-size cross-sectional representations each located in each section of said second outer portion of said second cross-sectional representation, wherein each additional reduced-size cross-sectional representation is similar to said second cross-sectional representation, wherein each group from said second associated group forms one of a plurality of third linked groups each third linked group having said group from said second associated group and a third associated group having at least one group from a fourth hierarchical layer, wherein each additional reduced-size cross-sectional representation has a second reduced-size outer portion and a second reduced-size inner portion, wherein each second reduced-size inner portion represents said group which is from said second associated group and which is associated with said section in which said second reduced-size inner portion is located, and wherein each second reduced-size outer portion has one or more second reduced-size sections each second reduced-size section corresponding to a group from said third associated group of one of said third linked groups.



11. (currently amended) A method as recited in Claim 9 wherein said step c) further comprises the steps of:

c6) ~~forming~~ displaying via said display device a third cross-sectional representation corresponding to one of said additional reduced-size cross-sectional representations, wherein said third cross-sectional representation has a third outer portion and a third inner portion each portion configured to represent an enlarged version of said second reduced-size outer portion and said second reduced-size inner portion respectively of said additional reduced-size cross-sectional representation, wherein said third cross-sectional representation is similar to said second cross-sectional representation; and

c7) ~~forming~~ displaying via said display device a plurality of next reduced-size cross-sectional representations each located in each section of said third outer portion of said third cross-sectional representation, wherein each next reduced-size cross-sectional representation is similar to said third cross-sectional representation, wherein each group from said third associated group forms one of a plurality of fourth linked groups each fourth link group having said group from said third associated group and a fourth associated group having at least one group from a fifth hierarchical layer, wherein each next reduced-size cross-sectional representation has a third reduced-size outer portion and a third reduced-size inner portion, wherein each third reduced-size inner portion represents said group which is from said third associated group and which is associated with said section in which said third reduced-size inner portion is located, and wherein each third reduced-size outer portion has one or more third reduced-size

Art Unit: 2616

sections each third reduced-size section corresponding to a group from said fourth associated group of one of said fourth linked groups.

14. (currently amended) A computer system comprising:

a bus;

a processor coupled to said bus; and

a computer readable memory device coupled to said bus and having computer-executable instructions stored therein for performing a method of diagramming a network having a plurality of devices, said method comprising the steps of:

a) determining a plurality of hierarchical layers for said network, wherein said devices are arranged in said hierarchical layers;

b) determining one or more groups in each hierarchical layer, wherein each group includes at least one device;

c) determining a first linked group having a first group from a first hierarchical layer and a first associated group having at least one group from a second hierarchical layer;

d) forming a first cross-sectional representation corresponding to said first linked group, wherein said first cross-sectional representation has a first inner portion representing said first group and a first outer portion having one or more sections each section corresponding to a group from said first associated group; and

e) forming a plurality of initial reduced-size cross-sectional representations each located in each section of said first cross-sectional representation, wherein each

Art Unit: 2616

initial reduced-size cross-sectional representation is similar to said first cross-sectional representation, wherein each group from said first associated group forms one of a plurality of second linked groups each second linked group having said group from said first associated group and a second associated group having at least one group from a third hierarchical layer, wherein each initial reduced-size cross-sectional representation has a reduced-size outer portion and a reduced-size inner portion, wherein each reduced-size inner portion represents said group which is from said first associated group and which is associated with said section in which said reduced-size inner portion is located, and wherein each reduced-size outer portion has one or more reduced-size sections each reduced-size section corresponding to a group from said second associated group of one of said second linked groups.

20. (currently amended) A computer system comprising:

a bus;

a processor coupled to said bus; and

a computer readable memory device coupled to said bus and having computer-executable instructions stored therein for performing a method of diagramming a network having a plurality of devices, said method comprising the steps of:

a) determining a plurality of hierarchical layers for said network, wherein said devices are arranged in said hierarchical layers;

b) determining one or more groups in each hierarchical layer, wherein each group includes at least one device; and

c) forming a multi-layered cross-sectional diagram corresponding to said network, wherein said multi-layered cross-sectional diagram has a plurality of cross-sectional representations which are similar to each other, wherein said plurality of cross-sectional representations have a plurality of sizes, and wherein each cross-sectional representation is adapted to visually represent a group from a hierarchical layer and is adapted to visually represent one or more other groups from another hierarchical layer, wherein said step c) includes:

c1) determining a first linked group having a first group from a first hierarchical layer and a first associated group having at least one group from a second hierarchical layer;

c2) forming a first cross-sectional representation corresponding to said first linked group, wherein said first cross-sectional representation has a first inner portion representing said first group and a first outer portion having one or more sections each section corresponding to a group from said first associated group; and

c3) forming a plurality of initial reduced-size cross-sectional representations each located in each section of said first cross-sectional representation, wherein each initial reduced-size cross-sectional representation is similar to said first cross-sectional representation, wherein each group from said first associated group forms one of a plurality of second linked groups each second linked group having said group from said first associated group and a second associated group having at least one group from a third hierarchical layer, wherein each initial reduced-size cross-sectional representation has a reduced-size outer portion and a reduced-size inner portion, wherein each

Art Unit: 2616

reduced-size inner portion represents said group which is from said first associated group and which is associated with said section in which said reduced-size inner portion is located, and wherein each reduced-size outer portion has one or more reduced-size sections each reduced-size section corresponding to a group from said second associated group of one of said second linked groups.

Claims 33-38 Cancelled.

#### REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance:

Regarding claim 1, Prior Art fails to disclose a method of diagramming a network having a plurality of devices comprising the steps of displaying via a display device a first cross-sectional representation corresponding to said first linked group, wherein said first cross-sectional representation has a first inner portion representing said first group and a first outer portion having one or more sections each section corresponding to a group from said first associated group and displaying via said display device a plurality of initial reduced-size cross-sectional representations each located in each section of said first cross-sectional representation, wherein each initial reduced-size cross-sectional representation is similar to said first cross-sectional representation, wherein each group from said first associated group forms one of a plurality of second linked groups each second linked group having said group from said first associated group and a second associated group having at least one group from a third

Art Unit: 2616

hierarchical layer, wherein each initial reduced-size cross-sectional representation has a reduced-size outer portion and a reduced-size inner portion, wherein each reduced-size inner portion represents said group which is from said first associated group and which is associated with said section in which said reduced-size inner portion is located, and wherein each reduced-size outer portion has one or more reduced-size sections each reduced-size section corresponding to a group from said second associated group of one of said second linked groups in combination with other limitations set forth in the respective claim.

Regarding claim 7, Prior Art fails to disclose a method of diagramming a network having a plurality of devices comprising the steps of displaying via a display device a multi-layered cross-sectional diagram corresponding to said network, wherein said multi-layered cross-sectional diagram has a plurality of cross-sectional representations which are similar to each other, wherein said plurality of cross-sectional representations have a plurality of sizes, and wherein each cross-sectional representation is adapted to visually represent a group from a hierarchical layer and is adapted to visually represent one or more other groups from another hierarchical layer in combination with other limitations set forth in the respective claim.

Regarding claims 14, Prior Art fails to disclose of a computer system comprising a computer readable memory coupled to the bus and having computer-executable instructions stored therein for performing a method of diagramming a network having a plurality of device comprising the steps of forming a first cross-sectional representation corresponding to said first linked group, wherein said first cross-sectional representation has a first inner portion

Art Unit: 2616

representing said first group and a first outer portion having one or more sections each section corresponding to a group from said first associated group and forming a plurality of initial reduced-size cross-sectional representations each located in each section of said first cross-sectional representation, wherein each initial reduced-size cross-sectional representation is similar to said first cross-sectional representation, wherein each group from said first associated group forms one of a plurality of second linked groups each second linked group having said group from said first associated group and a second associated group having at least one group from a third hierarchical layer, wherein each initial reduced-size cross-sectional representation has a reduced-size outer portion and a reduced-size inner portion, wherein each reduced-size inner portion represents said group which is from said first associated group and which is associated with said section in which said reduced-size inner portion is located, and wherein each reduced-size outer portion has one or more reduced-size sections each reduced-size section corresponding to a group from said second associated group of one of said second linked groups in combination with other limitations set forth in the respective claim.

Regarding claim 20, Prior Art fails to disclose of a computer system comprising a computer readable memory coupled to the bus and having computer-executable instructions stored therein for performing a method of diagramming a network having a plurality of device comprising the steps of forming a multi-layered cross-sectional diagram corresponding to said network, wherein said multi-layered cross-sectional diagram has a plurality of cross-sectional representations which are similar to each other, wherein said plurality of cross-sectional representations have a plurality of sizes, and wherein each cross-sectional representation is

Art Unit: 2616

adapted to visually represent a group from a hierarchical layer and is adapted to visually represent one or more other groups from another hierarchical layer in combination with other limitations set forth in the respective claim.

Regarding claim 27, Prior Art fails to disclose of a computer-readable medium comprising computer-executable instructions stored therein for performing a method of diagramming a network having a plurality of device comprising the steps of forming a first cross-sectional representation corresponding to said first linked group, wherein said first cross-sectional representation has a first inner portion representing said first group and a first outer portion having one or more sections each section corresponding to a group from said first associated group and forming a plurality of initial reduced-size cross-sectional representations each located in each section of said first cross-sectional representation, wherein each initial reduced-size cross-sectional representation is similar to said first cross-sectional representation, wherein each group from said first associated group forms one of a plurality of second linked groups each second linked group having said group from said first associated group and a second associated group having at least one group from a third hierarchical layer, wherein each initial reduced-size cross-sectional representation has a reduced-size outer portion and a reduced-size inner portion, wherein each reduced-size inner portion represents said group which is from said first associated group and which is associated with said section in which said reduced-size inner portion is located, and wherein each reduced-size outer portion has one or more reduced-size sections each reduced-size section corresponding to a group from said second associated group



Art Unit: 2616

of one of said second linked groups in combination with other limitations set forth in the respective claim.

Regarding claim 39, Prior Art fails to disclose of a computer-readable medium comprising computer-executable instructions stored therein for performing a method of diagramming a network having a plurality of device comprising the steps of forming a multi-layered cross-sectional diagram corresponding to said network, wherein said multi-layered cross-sectional diagram has a plurality of cross-sectional representations which are similar to each other, wherein said plurality of cross-sectional representations have a plurality of sizes, and wherein each cross-sectional representation is adapted to visually represent a group from a hierarchical layer and is adapted to visually represent one or more other groups from another hierarchical layer in combination with other limitations set forth in the respective claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

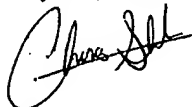
*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag G. Shah whose telephone number is 571-272-3144. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7682. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

cgs  
May 24, 2006



Chirag Shah  
Patent Examiner, Division 2616